

**Listing of Claims:**

1. (Previously Presented) A radar oscillator comprising:
  - an oscillating unit having amplifier means, a feedback circuit which applies a positive feedback from an output side to an input side of the amplifier means and a resonator which resonates at the predetermined frequency, the feedback circuit and the resonator cooperating with the amplifier means to enable oscillation at a predetermined frequency, the resonator being connected to an input section or output section of the amplifier means, and the oscillating unit outputting and stopping an oscillation signal having the predetermined frequency from the output side of the amplifier means in an oscillating state and an oscillation stop state, respectively; and
    - switching means connected to the oscillating unit, the switching means including an electronic switch which receives a pulse signal indicating a transmission timing of a radar wave and changes an operating state of the oscillating unit to the oscillating state at a first level of the pulse signal and the oscillation stop state at a second level of the pulse signal in order to intermit an output of the oscillation signal in response to a level of the pulse signal;
    - wherein the amplifier means includes an amplifier provided in an output stage of the oscillating unit;

wherein the oscillating unit has a power supply line for the amplifier means in the oscillating unit; and

25        wherein the switching means includes a first switch which opens or closes the power supply line for the amplifier means in the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state  
30        or the oscillation stop state.

2. (Previously Presented) A radar oscillator according to claim 1, wherein the oscillating unit has a high frequency earth line, and the switching means includes a second switch which opens or closes between at least one of the input section and the output section of the amplifier means in the oscillating unit and the high frequency earth line of the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state.

3. (Withdrawn) A radar oscillator according to claim 1, wherein:

the oscillating unit has a plurality of amplifiers cascade-connected to each other as the amplifier means;

5           the feedback circuit is arranged to apply a positive feedback to the input side of an amplifier at a first stage from the output side of an amplifier at a final stage of the plurality of amplifiers, and the resonator is connected to a cascade-connecting section of the plurality of amplifiers; and

10          the oscillating unit outputs and stops the oscillation signal having the predetermined frequency determined by the resonator from the output side of the amplifier at the final stage of the plurality of amplifiers in the oscillating state and the oscillation stop state.

Claims 4-8 (Cancelled).

9. (Previously Presented) A radar oscillator comprising:  
an oscillating unit having amplifier means and at least one of a feedback circuit which applies a positive feedback from an output side to an input side of the amplifier means and a resonator which resonates at the predetermined frequency, the at least one of the feedback circuit and the resonator cooperating with the amplifier means to enable oscillation at a predetermined frequency, the resonator being connected to an input section or output section of the amplifier means, and the oscillating unit outputting and stopping an oscillation signal having the predetermined frequency from the output side of the amplifier

means in an oscillating state and an oscillation stop state,  
respectively; and

switching means connected to the oscillating unit, the  
15 switching means including an electronic switch which receives a  
pulse signal indicating a transmission timing of a radar wave and  
changes an operating state of the oscillating unit to the  
oscillating state and the oscillation stop state at first and  
second levels of the pulse signal in order to intermit an output  
20 of the oscillation signal in response to a level of the pulse  
signal;

wherein the oscillating unit selectively has a high  
frequency earth line, a power supply line for the amplifier means  
in the oscillating unit, and an element to set the oscillating  
25 unit outside of a normal operation range, and

wherein the switching means includes a plurality of switches  
obtained by selectively combining:

a first switch which opens or closes between at least  
one of the input section and the output section of the amplifier  
30 means in the oscillating unit and the high frequency earth line  
based on the pulse signal indicating the transmission timing of  
the radar wave, thereby changing the operating state of the  
oscillating unit to the oscillating state or the oscillation stop  
state;

35               a second switch which connects or disconnects the element to set the oscillating unit outside of the normal operation range to and from the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state; and

40               a third switch which opens or closes the power supply line for the amplifier means in the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state.

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Claim 10 (Canceled).

11. (Currently Amended) A radar oscillator ~~according to claim 1, comprising:~~

an oscillating unit having amplifier means, a feedback circuit which applies a positive feedback from an output side to an input side of the amplifier means and a resonator which resonates at the predetermined frequency, the feedback circuit and the resonator cooperating with the amplifier means to enable oscillation at a predetermined frequency, the resonator being connected to an input section or output section of the amplifier means, and the oscillating unit outputting and stopping an

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oscillation signal having the predetermined frequency from the output side of the amplifier means in an oscillating state and an oscillation stop state, respectively; and

15 switching means connected to the oscillating unit, the switching means including an electronic switch which receives a pulse signal indicating a transmission timing of a radar wave and changes an operating state of the oscillating unit to the oscillating state at a first level of the pulse signal and the oscillation stop state at a second level of the pulse signal in order to intermit an output of the oscillation signal in response to a level of the pulse signal;

wherein the amplifier means includes an amplifier provided in an output stage of the oscillating unit;

20 wherein the oscillating unit has a power supply line for the amplifier means in the oscillating unit;

25 wherein the switching means includes a first switch which opens or closes the power supply line for the amplifier means in the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state;

30 wherein the oscillating unit has an element to set a resonance frequency of the oscillator in the oscillating unit to a frequency which prevents a positive feedback from the output

35 side to the input side of the amplifier means, thereby setting the resonance frequency outside of a normal operation range in the oscillating unit, and

wherein the switching means includes a third switch which connects or disconnects the element to set the resonance frequency of the resonator in the oscillating unit outside of the normal operation range to and from the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state.

12. (Previously Presented) A radar oscillator according to claim 2,

wherein the oscillating unit has an element to set a resonance frequency of the oscillator in the oscillating unit to a frequency which prevents a positive feedback from the output side to the input side of the amplifier means, thereby setting the resonance frequency outside of a normal operation range in the oscillating unit; and

the switching means includes a third switch which connects or disconnects the element to set the resonance frequency of the resonator in the oscillating unit outside of the normal operation range to and from the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby

changing the operating state of the oscillating unit to the  
15 oscillating state or the oscillation stop state.

13. (Previously Presented) A radar oscillator comprising:  
an oscillating unit having amplifier means, a feedback  
circuit which applies a positive feedback from an output side to  
an input side of the amplifier means and a resonator which  
5 resonates at the predetermined frequency, the feedback circuit  
and the resonator cooperating with the amplifier means to enable  
oscillation at a predetermined frequency, the resonator being  
connected to an input section or output section of the amplifier  
means, and the oscillating unit outputting and stopping an  
10 oscillation signal having the predetermined frequency from the  
output side of the amplifier means in an oscillating state and an  
oscillation stop state, respectively; and  
switching means connected to the oscillating unit, the  
switching means including an electronic switch which, receives a  
15 pulse signal indicating a transmission timing of a radar wave,  
and changes an operating state of the oscillating unit to the  
oscillating state and the oscillation stop state at first and  
second levels of the pulse signal in order to intermit an output  
of the oscillation signal in response to a level of the pulse  
20 signal;

wherein the resonator is connected to the input section or output section of the amplifier means, and the oscillating unit outputs and stops the oscillation signal having the predetermined frequency determined by the resonator from the output side of the 25 amplifier means in the oscillating state and the oscillation stop state, respectively;

wherein the oscillating unit selectively has a high frequency earth line, a power supply line for the amplifier means in the oscillating unit, and an element to set a resonance 30 frequency of the resonator in the oscillating unit outside of a normal operation range in the oscillating unit, and

wherein the switching means includes a plurality of switches obtained by selectively combining:

a first switch which opens or closes between at least 35 one of the input section and the output section of the amplifier means in the oscillating unit and the high frequency earth line based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop 40 state;

a second switch which connects or disconnects the element to set the resonance frequency of the resonator in the oscillating unit outside of the normal operation range to and from the oscillating unit based on the pulse signal indicating

45 the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state; and

50 a third switch which opens or closes the power supply line for the amplifier means in the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state.

14. (Withdrawn) A radar oscillator according to claim 3, wherein the oscillating unit has a high frequency earth line, and the first switch is arranged to open or close between at least one of the input section of the amplifier at a first stage 5 of the plurality of amplifiers and the output section of the amplifier at a final stage of the plurality of amplifiers and the high frequency earth line of the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state.

10 15. (Withdrawn) A radar oscillator according to claim 3, wherein the oscillating unit has an element to set the oscillating unit to a frequency which prevents a positive feedback from the output side to the input side of the amplifier

5 means, thereby setting the resonance frequency outside of a normal operation range, and

the switching means includes a second switch which connects or disconnects the element to set the oscillating unit outside of the normal operation range to and from the oscillating unit based 10 on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state.

16. (Withdrawn) A radar oscillator according to claim 3, wherein the oscillating unit has a power supply line for said plurality of amplifiers serving as the amplifier means in the oscillating unit, and

5 the switching means includes a third switch which opens or closes the power supply line for at least one amplifier of the plurality of amplifiers in the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating 10 unit to the oscillating state or the oscillation stop state.

17. (Withdrawn) A radar oscillator according to claim 3, wherein the oscillating unit selectively has a high frequency earth line, a power supply line for said plurality of amplifiers

5 serving as the amplifier means in the oscillating unit, and an element to set the oscillating unit outside of a normal operation range, and

the switching means includes a plurality of switches obtained by selectively combining:

10 the first switch which opens or closes between at least one of the input section of the amplifier at the most frontal stage of said plurality of amplifiers serving as the amplifier means in the oscillating unit and the output section of the amplifier at the final stage of said plurality of amplifiers and the high frequency earth line of the oscillating unit based on 15 the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state;

20 a second switch which connects or disconnects the element to set the oscillating unit outside of the normal operation range to and from the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the operating state of the oscillating unit to the oscillating state or the oscillation stop state; and

25 a third switch which opens or closes the power supply line for at least one amplifier of the plurality of amplifiers in the oscillating unit based on the pulse signal indicating the transmission timing of the radar wave, thereby changing the

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operating state of the oscillating unit to the oscillating state or the oscillation stop state.

Claims 18-25 (Canceled).